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ABSTRACT

A sample of 570 Scottish classroom teachers, promoted staff, and senior management recorded the work they were doing for a full week, in 15-minute blocks of time. Respondents also recorded whether or not they felt stressed on that day and described the cause and symptoms of the stress. Results revealed that the mean working day was 7.89 hours, with 3 hours on the weekend. Over the whole week, teachers recorded a mean of 42.5 hours work (46.25 if non-workload break time is added). Administration of paperwork took up about a fifth of senior management time in secondary schools and less in primary schools. Meetings took up almost another fifth. Ninety-three percent of respondents reported at least one occasion of stress during the week. The longer the hours worked, the more stress occasions reported. Coping strategies included seeking support from family, friends, or colleagues or various hobbies/relaxation. On the Occupational Stress Indicator, teachers scored higher on the job-specific stress scale than any other group for which norms were available. Appendixes contain sample pages of a workload diary and demographic characteristics of the respondents. (Contains 24 references.) (JDD)



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The Scottish Council for Research in Education

ED 368 716

# Teachers' Workload and Associated Stress

*Margaret Johnstone*

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# Teachers' Workload and Associated Stress

*Margaret Johnstone*

The Scottish Council for Research in Education

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The report reflects the views of the author and not necessarily those of SCRE.

**Note**

The report on the workload study was presented to the funders in November 1993. The EIS then circulated copies within Scotland. This version contains no substantive changes except in relation to one of the figures. Figure 5.1 in the draft report was incomplete. Stress incidence over the seven days did not show the level for Sunday. However, this does not affect the discussion or conclusions. Various small errors have been corrected, eg in the bibliographic references. A second appendix giving more detail of the respondents has been added.

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The report reflects the views of the author and not necessarily those of SCRE.

## NOTE

An earlier version of this report was presented to the funders, who then circulated copies within Scotland. This version contains no substantive changes. Various small typographical errors have (we hope) been corrected, tables have been presented a little more clearly and some missing references reinstated. A second appendix giving a more detailed picture of the sample has been added.

## SUMMARY


- The sample was a good size (N=570) and represented a return of 66% from those contacted. A further 5% return of partially completed *Workload Diaries* or completed but late diaries was received.
- The sample contained classroom teachers from all stages and subjects and promoted staff and senior management from primary and secondary schools. The only group under-represented was staff from nursery schools. The sample came from schools chosen at random from four Scottish regions. Overall, the sample appeared representative of Scottish teachers and of Scottish schools.
- The sample had a slight bias to union membership, but non-members were also included.

*The response rate and sample of respondents were such that findings could be generalised to the wider population of Scottish teachers.*

- The *Workload Diary* asked the sample to record over the day (using 15-minute blocks of time) the work they were doing. Codewords were offered to make the recording easier. This was done for a full week, the seven days from Sunday 12 September to Saturday 18 September inclusive.
- The *Workload Diary* also asked the sample to record for each day in the diary whether or not they felt stressed on that day, and if so to describe the cause of stress, the symptoms and any help.
- The sample also completed an *Occupational Stress Indicator* giving a more general stress profile. There was a 62% return rate here.

*Altogether the people who replied completed two lengthy measures. The length of the measures would make it more difficult to create a consistent ideal picture of the week's work. It would be easier just to record and report the reality of the week. It is important to note that this was a week early in the new school year.*

- The mean working day for the sample was 7.89 hours. Work at the weekend averaged out at 3 hours.
- Over the whole week, teachers recorded a mean of 42.5 hours work (46.25 if non-workload break time is added). This is seven-and-a-half hours more than the adopted norm of 35 hours per week, in effect an extra day of work per week.

*The teachers questioned the typicality of the week. Although 44% (N=251) thought it had been reasonable, it was likely to be seen as typical of the 'honeymoon period' at the start of the year. The mean score of hours worked per week was lower than mean scores for a teacher's week found in other researches, but direct comparison with these researches cannot be sustained (See Chapter 3 for more detail on this.).*

- Administration in terms of paperwork took up about a fifth of senior management time in secondary schools, rather less in primary schools. Meetings took up almost as much time as paperwork administration in the secondary schools, but less time in the primary schools. For teachers at both secondary and primary level, the main elements of work were teaching itself, preparation for teaching and marking.
- The majority of the sample 93% (N=531) reported at least one occasion of stress during the survey week. Most people reported between three and five incidences. The longer the hours worked, the more stress occasions reported.
- Workload was the most frequent cause of stress; new demands, administrative tasks and planning associated with change were quoted as stressors.

*People expected to do extra work, but perceived the demand as in excess of their personal estimate of what was reasonable. The connection between workload and feelings of stress appeared to be real rather than imagined. Those who felt their workload to be unreasonable did record longer hours of work and also more occasions of stress.*

- Self-reported symptoms of stress were physical (headaches, stomach aches, etc.) and mental (anger, anxiety, depression).
- Coping strategies were seeking support from family, friends or colleagues or various hobbies/relaxation. One in twelve people reported 'a glass of wine' or 'a stiff whisky' as their coping response.
- Over half of the sample reported that they had used no particular strategy or had not received any help.

*The research looked at self-report of occasions of stress. The depth and impact of the stress felt cannot be judged. Nevertheless, the symptoms of stress (such as anger or anxiety) were seen by some of the teachers as spilling over into relationships with classes or colleagues.*

- On the *Occupational Stress Indicator*, teachers scored higher on the job-specific stress scale than any other group for which norms are available. The teachers' mean score was 33.25. The nearest group score was that of general practitioners at 32.48.
- Overall scores on the various scales of the *Occupational Stress Indicator* had only weak (but statistically significant) correlations with teachers' reporting of stress incidence. Correlations with hours worked were even poorer.

*The teachers' scores on the OSI were not normally distributed. This makes statistical comparison and inference more difficult. Nevertheless, the teachers did seem to indicate a high-stress profile.*

# 1 How workload and stress were measured

*The credibility of the findings depends upon the measures used and also on who replied. In the next chapter we look at the sample; in this chapter we look at how the teachers' hours of work were recorded, how day-to-day stress was reported and how a stress profile for teachers was derived.*

To find out how many hours teachers work, what they do during these hours and how they feel about the work, the researcher has a limited number of options. A general questionnaire asking teachers to average out their work or give estimates of time on task would be of little use unless those replying had kept some kind of record over a period of time. Responses which depend on memory will be responses tending to be unreliable. One possible approach is to use observations during the work hours, supplemented by teachers' own records of out-of-school work. This option is labour intensive and technically difficult in terms of inter-researcher reliability; only a small sample could be studied in this way (eg. Hilsum and Cane, 1971; Hilsum and Strong, 1978). Although interesting and illuminative, data gathered from small samples is not generalisable.

Another possible approach is to ask teachers to keep a day-by-day diary. This option allows for a much larger sample of teachers, but the diary or recording form has to be pre-defined and unambiguous yet at the same time appropriate and flexible enough to cover different teachers' tasks and hours. Prior studies in this field have used such a record of teacher time (Campbell and Neill 1990, 1991). These studies used a recording scheme of teacher self-report at three minute intervals over the day, with 27 coded activities as possible entries. This demanding and complex measure is something we shall return to in Chapter 3.

Given that a larger sample with potential for generalisability was sought for this research rather than a smaller, illustrative sample, the option of teacher self-report in diary format seemed the best approach. Self-report could of course be criticised as a presentation of an ideal teaching self rather than everyday reality. This possibility could still exist with observation in that a week of extra-special effort by those observed would be possible. However, experience with lengthy questionnaires sent out to teachers suggests that:

- teachers try to respond as fairly as they can
- it is more trouble to create a false record than to be straightforward.

## The workload diary

A prototype *Workload Diary* was created and piloted for critical comment and for the identification of appropriate codewords and time spans.

The final version of this *Workload Diary* had one page for each day of the designated survey week, which was from Sunday 12 September to Saturday 18 September inclusive. Each

day was presented as a series of 15 minute units of time, starting at 6 am and ending at midnight. The page also had the pre-defined codewords set out as a reminder; the codewords and their definitions were explained in full at the start of the diary. (Sample diary pages are attached as Appendix 1.)

The codewords offered pre-defined categories of what teachers did (eg TEACH, ADMIN, PLAN) and were kept as simple as possible. There were five slightly different lists of codewords, to allow for the five different teaching jobs in the sample, that is senior managerial staff, principal teachers of subject and of guidance (secondary only) teachers, and nursery staff. (The sample is discussed more fully in Chapter 2). The codewords therefore had a common core but allowed for specific job responsibilities where possible. The respondents were encouraged to expand or explain a codeword if they so wished, and of course a category of 'other' was provided.

In addition to the pages quantifying hours worked and tasks undertaken, the *Workload Diary* had a biographical section and an open section soliciting any views on teacher workload and on stress. Stress associated with work was an important aspect of this study.

**The *Workload Diary* and daily record of stress**

For each dated page of the *Workload Diary*, from Sunday 12 September to Saturday 18 September, a facing page asked about any stress associated with that day. Apart from an initial yes/no reply to feeling stressed, the questions on this page were completely open. Any respondent who replied 'yes' to feelings of stress was asked to describe:

- what they thought caused this stress
- what their symptoms were, how they judged themselves to be stressed
- any coping strategies or actions taken.

No prior assumptions were made in the questionnaire about causes of stress, symptoms of stress or coping strategies. The respondents were not given clues as to how they should feel or what they should say, in the form of lists of probable courses or likely symptoms, for example.

A review of previous research indicates that there are four major causes of teacher stress (see Johnstone, 1989, Chapter 3). These are:

- pupils' failure to work or to behave acceptably
- poor working conditions, generally in terms of relationships with colleagues
- workload, in terms of overload, underload or routine work
- poor school ethos.

These causes are in the main derived from teachers' replies to questionnaires asking them to think back or to hypothesise classroom situations. The research reported here asked teachers to focus on each of seven days, five of them school days, each of which had been self-recorded in some detail. The teachers' views on the stress they felt ought, therefore, to reflect possible relationships with the day's work, if such relationships existed.

Nevertheless, a note of caution is warranted. Even asking about stress raises the possibility of an affirmative response or the exaggeration of feelings of irritation into full blown stress. Furthermore, the research itself had been widely publicised in the press. An unknown percentage of the sample may have decided that they *ought* to be stressed by their work. It is also possible that stress ascribed to work may derive from other factors or from the interaction of other factors (such as personality) with work. The idea of occupational sress is in itself contentious (Briner and Reynolds, 1993).

**A broader view of stress: the Occupational Stress Indicator**

The *Workload Diary* used alone could provide information on day-to-day stress which might or might not be associated with the work of that day. Further information about other possible stress factors such as personality could help place the day-to-day stress in context. It seemed unlikely that teachers would be willing to complete a battery of additional measures, yet some broader profile of stress seemed essential. In Britain, the *Occupational Stress Indicator* (Cooper, Sloan and Williams, 1988) offers a number of scales, on different aspects of stress and for different occupational groups. There are validation studies of this measure (Robertson, Cooper and Williams, 1990; Cooper and Williams, 1991) and normative data is offered for different occupational groups. It was decided that this single measure, which had been quite widely used, would be more acceptable to the teachers than several separate health/personality measures.

The *Occupational Stress Indicator* is a psychometric measure designed to be applicable to almost all occupations. Unlike measures such as the American *Maslach Burnout Inventory*, the OSI provides data on several potential stress factors. These are:

- job satisfaction
- mental health
- physical health
- Type A behaviour (ie, aggressive, striving)
- 'control' perceptions *
- six different sources of job pressure
- six different coping strategies.

** A factor affecting feelings of stress is the individual's perception of being in control of his/her life, or of being in the control of others. In a time of centrally-decided changes to the teaching profession, this may be an important factor relating to overall stress.*

All of these different factors contribute towards a greater or lesser feeling of stress in the individual. In the analysis of the data, the OSI scales could be used to help interpret the *Workload Diary* findings. In addition, the OSI results would provide a stress profile for teachers to set alongside general population norms.

One criticism of the *Occupational Stress Indicator* is that, in the attempt to make the measure applicable and credible over a variety of occupations, from blue-collar workers to senior civil servants, elements specific to a single occupation cannot be included. The OSI is in fact

developed from earlier work by Travers and Cooper (but not published until later in 1989) on a large sample of teachers. A selection of statements specific to teaching was taken from that earlier questionnaire and included as an extra insert in the OSI booklets sent out. This was coded as a seventh, additional source of job pressure but is in effect an add-on extra rather than a validated part of the OSI itself.

**Summary**

The teachers were asked to complete two lengthy measures during the survey week 12-18 September inclusive. Firstly, they had a *Workload Diary*. This gave data on:

- the hours worked over the week, day-by-day, reported as 15 minute units
- the activities making up that week and their relative proportions
- the incidence of stress felt day-by-day, with information on the causes, symptoms and any coping strategies.

The *Workload Diary* appeared to be straightforward enough to allow teachers to record each day without undue difficulty or ambiguity, yet flexible enough to leave room for individualised responses.

Secondly, the teachers had the *Occupational Stress Indicator*, a widely used, validated and normed measure. This gave data on the overall stress profile of teachers.

## 2 THE TEACHERS WHO REPLIED

*The generalisability of the findings depends upon what was asked and who replied. In Chapter 1 we looked at the two measures used; in this chapter we look at how the sample was drawn up and who actually responded.*

Union membership lists were deliberately not used as a source of respondents, in order to maintain the independence of the research. Avoiding membership lists implied approaching teachers through the regions, a standard practice in SCRE research, but given the sensitive nature of the topic and of the source of funding, we anticipated that this would lead to some correspondence and discussion. Accordingly, we limited the regions contacted to four which were broadly representative of urban and rural, large and small schools. It was hoped that this self-imposed limit would cut down on negotiations with the regions, but from first approach to final consent took five months.

### The targeted sample

The schools were not selected on a structured basis, to replicate or represent any broad pattern. There was no prior hypothesis that (for example) workload was heavier in urban schools or large schools, or indeed in smaller rural schools with a teaching head and limited secretarial assistance. A variety of schools was sought, to give a broad and general response. A random selection was made of both primary schools and secondary schools, with rather higher numbers selected in the more populous areas. These schools were then contacted individually for prior consent to approach staff.

After negotiation, 58 primary schools (just over half those contacted) and 32 secondary schools (just under two-thirds of those contacted) agreed to participate. These schools were in different urban/rural locations, and were of different sizes. There was no bias in the sample towards larger schools, for example, or small schools. Individual names were then selected from school lists. There were constraints in this selection, as the overall sample had to contain:

- the head teacher plus one assistant head or Depute where possible
- teachers of each different subject (secondary) or different stages (primary)
- principal teachers from a range of subjects, plus principal teachers of guidance
- nursery staff where possible.

For a few schools, both primary and secondary, headteachers asked to select staff themselves, within the given categories. This was accepted. Staff from these schools may have been volunteers with particular views to express, but in fact returns from this sub-group made up less than 6% of the total.

**The returns**

Overall, 880 individual teachers were sent the two measures, 365 from the primary sector and 515 from the secondary sector. In the event there was an unforeseen shortfall in both sectors, caused by circumstances such as the delayed refurbishment of the school taking place during the survey week. This cut the potential respondents down to 860. Returns of the *Workload Diary* were received from 602 teachers, a remarkable return rate of 70%, given the length and complexity of the measure. The usable returns were rather fewer; about 30 people sent in *Workload Diaries* which had gaps or were only partially completed. The gaps were not always explained, but where they were, a local holiday or sickness absence were the main reasons. The time deadlines on the research precluded carrying out a special analysis of these differently-completed returns. The sample was therefore reduced to a core of 570 fully completed *Workload Diaries* . Returns of the *Occupational Stress Indicator* fell short of this. Some 530 people completed the *Occupational Stress Indicator.*

These figures represent a return rate of 66% and 62% respectively, for the *Workload Diary* and the *Occupational Stress Indicator,* still an excellent response to an unsolicited questionnaire. Of course, the views of those who did not respond cannot be known, but equally it cannot be assumed that the missing third of the sample were all working the minimum of contracted hours and were happily unstressed.

**Profile of respondents**

From the broad picture of who was approached and how many people replied we now turn to the detail of who these respondents were. The sample contained about equal numbers of primary teachers (31%;N = 177) and of secondary teachers (30%;N = 172). Primary school senior management (10%;N = 58) was slightly better represented than secondary school senior management (8%;N = 47), but promoted staff in secondary were also represented (11%;N = 65 subject; 7%;N = 42 guidance). The nursery sector was scarcely represented at all (2%;N = 8). Within the primary sector, all stages were about equally represented, with about a fifth of the sample teaching a composite class. Within the secondary sector all teaching subjects were represented, including learning support. The numbers are rather small if sub-groups are to be analysed separately, but the overall sample size is acceptable as is the broad representation of stages and subjects.

Other background information was collected which showed that our sample contained more female teachers than in the general population of teachers, and rather fewer younger teachers. The high percentage of female teachers (66% female, 33% male) is accounted for by the preponderance of females in the primary school sub-group. Over nine in ten of that sub-group were female. For the secondary school sub-group, the ratio of female to male was more even, almost 50:50. (See Appendix 2 for details.)

The relative absence of younger teachers might imply that more optimistic members of the profession have tended not to reply. Certainly, the slightly older age profile reflects the third of

the sample in promoted posts. The sample may be weighted towards those with a potentially heavier workload, but it also represents experience of the demands of the teaching profession and perhaps a better ability to cope with life in school. Three quarters of the sample had been in teaching for eleven years or more. Over half of the sample had been in their present school for six years and more. This seems to be a relatively settled group of people. In fact, when asked to speculate about their future, only 44 people (8%) saw themselves as working outside of teaching in ten years time. This could be viewed as pessimism about the job market rather than devotion to teaching, but few people chose to speculate or comment on whether circumstances prevented a preferred move out of teaching.

On the whole, the profile of the sample who returned *Workload Diaries* appeared to be reasonably representative of Scottish teachers. This suggests that their views on workload and tasks done may be generalisable to the broader population of teachers. However, in relation to the stress felt by the teachers there will be mediating factors such as personality traits, or the way in which the school was managed, or what kind of intake the school had. We can make no claims for personality. There were almost 600 people in the sample, and it seems reasonable intuitively to consider that these people were not all of a specific personality type linked to stress (or to the ability to cope with stress). In relation to the schools, as already stated there was no bias in the group of schools participating towards the urban or rural, the large or small. Although the sample of schools was not a formally stratified one, the different types of Scottish school were represented for size and location, therefore the views of the teachers from these schools is more likely to be representative of all Scottish schools in these respects. As to the individual schools themselves, the sample was asked some background questions. These elicited the teachers' broad opinions of their schools.

About two thirds of the sample thought the pupils were of average ability or higher in their schools. About seven-eighths of the sample thought that pupils caused low level behaviour problems or were generally well behaved; the former view was a little more common that the latter. About three quarters of the sample thought parents were supportive or even actively interested in the school. These responses were not explored in any detail, but overall they do not give a wholly pessimistic picture of what their schools were like for the teachers who replied. Although the teachers noted the incidence of low-level behaviour problems - and these can be regarded as stressful- this incidence was similar to that found in a survey of school discipline which was based on over 1,000 responses from teachers in a stratified representative sample of schools (Johnstone and Munn, 1992). The circumstances and context of teaching were seen more positively than negatively by the majority of people in the sample. We cannot say whether this is representative of all Scottish teachers, but it suggests a fairly stable stand-point for the sample.

One final point: the use of union membership lists had been eschewed, but in the response it was found that 87% (N = 496) of those with complete *Workload Diaries* were members of a teaching union, not always the EIS. As the EIS represents a possible 80% of the teaching

profession, it may be that the sample contains fewer non-union teachers than hoped, but nevertheless there was non-union representation.

**Summary**

- The sample of schools contacted was a random one. About half the primary schools (58) agreed to take part and about two-thirds of the secondary schools (32). Schools were rural and urban, large and small. There was no bias in location or size.
- Of the teachers who were sent the *Workload Diary* and the *Occupational Stress Indicator*, 66% (N = 570) and 62% (N = 530) respectively returned fully completed responses.
- The overall size of the sample was good, with a broad representation from different teaching subjects (secondary) and different stages (primary).
- The teachers in the sample tended to be a little older, to have been in teaching for at least eleven years and to have been settled in their schools for at least six years. About four in ten were in a promoted post. These combined factors could have helped them organise any workload pressures and cope with the demands of teaching.
- The teachers' opinion of their schools in terms of pupils and parents was more positive than negative. They did not anticipate leaving the profession, but this could reflect lack of opportunity.
- Overall, the teachers in the sample appeared to be representative of Scottish teachers, and from schools which were representative of the broad generality of Scottish schools.
- There was a slight bias towards union membership.

## 3 WORKLOAD HOURS

*In looking at teacher workload over the survey week, there are two points which affect how the results can be interpreted. Firstly the week of the survey was very early in the new term, the fourth week of term in some regions. Secondly the findings have to be related to what the teachers saw as reasonable or as typical in terms of workload. Research into stress also indicates that the quality of work demand is as important as the quantity of work demand. This chapter looks at quantity; Chapters 4 and 5 look at quality.*

Before moving on to the figures, a brief word about the credibility of the response may be appropriate. The *Workload Diary* was a self-report of hours worked. We cannot tell whether some respondents were tempted to gild the lily and present an image rather than the reality. We cannot tell whether respondents made simple errors in recording their response. However, the response overall seemed consistent with the reality of teaching. The formal hours established for teaching amount to 27.5 hours during the week, plus an overall amount of discretionary hours' work. These discretionary hours bring the working week up to 35 hours. People did not spend more hours teaching than there were hours available in the school week, one check on the accuracy of the response. Class contact time is established as a maximum of 23.5 hours in secondary schools and 25 hours in primary schools. Only 2% of the teachers (N = 11, and not all from the primary sector) had class contact in excess of 25 hours in the week. In general, therefore, it appears that the reporting of hours worked has face validity. Comparison with the findings of other research is more complex. This is done at appropriate points in the chapter.

**The teachers' week**

The range of hours worked ran from the statutory minimum to a handful of people who recorded over 60 hours work in the week. Overall, the sample response was skewed to the heavier end of workload.

> *For the sample of teachers, at this early stage in the year, the mean of hours worked over the seven days surveyed was 42.5 hours. This was seven and a half hours over the adopted norm of a 35 hour week.*

In effect, the teachers were working a six-day week. These hours of work excluded any time taken as a break during the school day ; such time is not part of the teachers' contracted hours. However, the 42.5 hours included work done during breaks. Break times vary from region to region, but at the very least we could suppose an overall week's break time of 6.25 hours (5 lunch breaks of 1 hour and 5 short intervals of 15 minutes). The actual break time taken by the teachers over the school week averaged out at a mean of 3.7 hours, therefore about half of teachers' breaks were actually spent on work. Generally this was work in connection with

supervising pupils, disciplining pupils or counselling pupils, although breaks could also be spent planning or having staff meetings.

During the teachers' week, therefore, their breaks were curtailed and interrupted by work demands. Work also expanded into evenings or into weekends (though people tried to avoid this). Only 12% (N = 69) of the sample recorded no school work at the weekend. The mean amount of work time at weekend was 3 hours.

**The typicality of the week's work**

The respondents were asked whether the week's workload had been reasonable, and whether the work had been typical. Unfortunately, this latter question proved to be ambiguous. Some teachers took 'typical' to mean typical of all teaching, others took it to be typical of the early part of the year:

> the honeymoon period when everything seems under control and you actually believe you're on top of the job.

This difference in interpretation emerged from the explanatory notes people added to their replies. The ambiguity makes interpretation of the response more difficult, but not impossible. Table 3.1 shows the general pattern.

*Table 3.1: A reasonable and typical week?*

| | % | N = 570 |
|---|---|---|
| both reasonable and typical | 37 | 213 |
| unreasonable but typical | 23 | 130 |
| reasonable but not typical of all teaching | 15 | 85 |
| unreasonable but not typical of this early stage of the term | 11 | 60 |
| no reply to one or other question | 14 | 82 |

Almost four people in ten registered a week which was reasonable, but it was not always clear whether they saw this as typical of all their teaching or typical only of the early part of the term. The latter was the more common view. A few people added that in teaching there is no such thing as a typical week, therefore the question could not be answered. This may be the case, that the teaching year is a series of peaks and troughs, but what qualifies as a trough? If this early week of term created seven and a half hours extra work overall then a peak might be considerably larger.

**Some comparisons of workload**

Before we leave the quantification of hours worked, we should note the difference between the response of this sample and responses from teachers surveyed in England for AMMA (Campbell and Neill, 1990;1991) The existence of that research was flagged briefly at the start of this chapter and also in Chapter 1, where it was noted that the researchers used a self-report recording sheet divided into three minute intervals, with 27 possible codewords to enter. The self-reports were gathered at different points in the school year, so that the 95 infant teachers or the 348 secondary teachers involved in the two studies in effect described between them a whole school year.

Each teacher completed a record of 14 (infant teachers) or 7 (secondary teachers) consecutive days' work in school and at home, but the figures derived from these studies were rather difficult to follow. Firstly, all breaks were included in the AMMA calculations; this is easily matched in the Scottish sample by reinstating non-worked break time in the calculations. More importantly, the workload calculations were done in such a way that only part of the work is broken down into work in school and work at weekends. For example, a mean number of hours worked over the week is given, which is then averaged out at 7.8 hours per day for seven days. This may seem a relatively minor point, but the failure to separate clearly work days from weekends confuses the picture. The AMMA weekly totals of 49.5 hours for infant teachers and 54.4 hours for secondary teachers could make the Scottish teachers' 46.25 hours per week (i.e. 42.5 hours plus breaks) look rather less than it is. Detailed discussion of what makes up these mean weekly hours may look like quibbling, but the AMMA figures do lack clarity. For example, the mean day for the AMMA sample was 7.8 hours; the mean *week day* for the Scottish sample was 8.64 hours if breaks are reinstated to keep parity of method.

Other comparable research is hard to find. There is another union funded study which again gives rather higher hours, a weekly average of 51.8 hours (NAS/UWT 1991). The figures reported there are not backed up by information on how the data was gathered, the methodology used or indeed the length of the week. Breaks are included in the calculations and the sample appears to be about 280, of whom the majority (206) were secondary teachers. There is an older research, two studies of the teachers' day (Hilsum and Cane 1972; Hilsum and Strong 1978) which arrived at figures rather closer to the Scottish findings. This research was carried out by a mixture of observation during the school day and self-report of out-of-school work. Each sample was quite a small one (N = 129; N = 201). The daily work mean calculated on the basis of snapshot records over the whole school year was 8.45 hours per school day. This included work done during breaks, but not real break time. The daily work mean was 7.89 hours for our own sample, surveyed at only one time period, and that one which was early in the school year. Given that the teachers' day studies covered peak workload points in the year as well a quieter times, the gap between that daily mean and the daily mean for the Scottish sample may not be too wide. Nevertheless, this is an old study, and teaching has changed since then.

**Summary**

- Over the whole week, teachers recorded a mean of 42.5 hours work, seven and a half hours more than the contractual 35 hours.
- The mean working day over Monday to Friday was 7.89 hours. Work over the weekend averaged out at 3 hours over both days.
- About half of the time designated as break time was spent working; real breaks were not included in work time calculations.
- The typicality of the week was questioned by the teachers (for different reasons), although 44% (N = 251) of the sample thought the week had been both reasonable and typical.
- Comparisons with earlier researches are difficult. Superficially the hours worked over the survey week appear to be lower than the hours worked by the other teacher samples, but the methods and calculations used in these other researches make direct comparison with the results of this study invalid.

## 4 WORKLOAD ACTIVITIES

*Chapter 3 looked at the quantity of workload, the hours worked. This chapter discusses what filled these hours, the activities which made up the workload. The recording system was fairly blunt, using 15 minute time spans, but a broad picture of teacher tasks was drawn up. This gives some insight into the quality of the workload, an issue which will be further pursued in Chapter 5.*

The teachers who responded were asked to use a list of codewords when describing their activities. Some of the codewords had an additional letter code offered; for example, the codeword ADMIN could be used for administration/paperwork, but respondents were asked to add the letters SEC if the specific admin task had been low-level, such as putting notes to parents into envelopes. These codewords were drawn from general writings about teachers' tasks and were discussed with teachers in order to establish any particular concerns for any sub-group. The groups represented in the sample were senior management (primary and secondary), middle management (secondary, including guidance), class teachers and nursery staff. The codewords were reproduced on each diary page; each was explained more fully at the start of the *Workload Diary* (see Appendix I for an example of codewords). This meant that the teachers were constrained by having their work pre-defined and not being allowed to give free descriptions of tasks. This constraint was imposed to help with the coding and analysis of response, but accurate analysis of the teachers' work hinges on the clarity and interpretation of the codes. For example, did everyone who used the code PLAN really mean a planning task and not ADMIN? It is impossible to tell what everyone understood by every code, but the majority of the respondents seemed to have no difficulty with the codewords.

### The work done

Only a minority of the respondents added explanations or descriptions to their use of the codewords. Where this was done, it indicated a consistency in the response and in the interpretation of what counted as PLAN, ADMIN and so on. There was a range of tasks cited under each codeword, which served to exemplify what people meant; for instance:

| PLAN tasks | ADMIN tasks |
|---|---|
| • preparing pupils lessons, worksheets, individual learning programmes | • registration and record keeping |
| • setting up, preparing, creating resources | • writing up reports |
| • organising timetables and changes | • keeping all pupil files and staff files up to date |
| • developing school policy or the curriculum | • arranging meetings |

Generally, what was given by teachers and by school management as examples of a codeword activity tended to be the anticipated range of work, although the category 'other' covered some unexpected tasks such as painting a wall or refurbishing the school's battered stock of hymn books. Information in detail on the different tasks listed is perhaps superfluous. The important point is that there did appear to be a degree of consistency in reporting tasks.

**How time was shared out on tasks**

Classroom teachers and middle or senior management had different task profiles, reflecting the different demands of the specific post. The allocation of time to task is shown separately for each group. Figures 4.1 to 4.6 give the broad picture for six of the sample sub-groups. Nursery staff were such a small group that this has been omitted. These tasks shown in the histograms are not the only ones, but they are the main consumers of teacher time. All tasks averaging out at less than 30 minutes per week have been omitted from figures 4.1 to 4.6. Real break time has been included to give an idea of the way in which lunchtime and interval(s) have been eroded by work demands. In addjtion, all the histograms have a category called MIXED WORK, a code used in sorting out the data, to cover any 15 minute time-span during which a variety of tasks (or interruptions) took place. This category is probably an underestimate of mixed or broken time spans, in that teachers may simply have recorded the major activity of any 15 minute span rather than note down details. Please note that the use of this category means that the category *teaching* is under-represented. Most of the mixed work consisted of interuptions to teaching or administrative tasks undertaken during a teaching block of time.

*Figure 4.1 : Primary school management : task profile (N=58)*

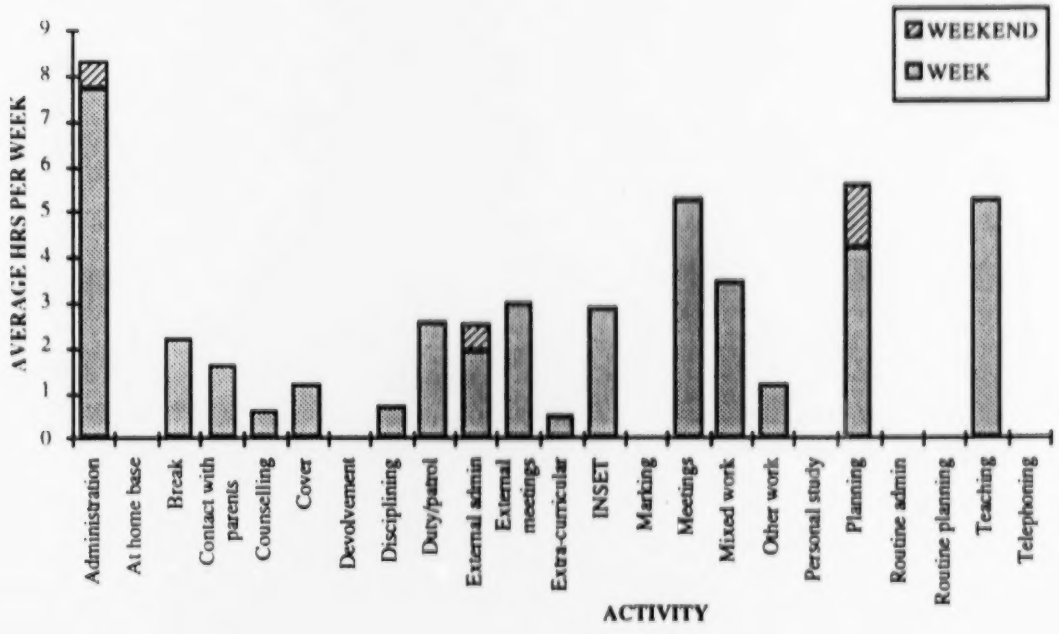




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*Figure 4.2 : Secondary school management : task profile (N = 47)*

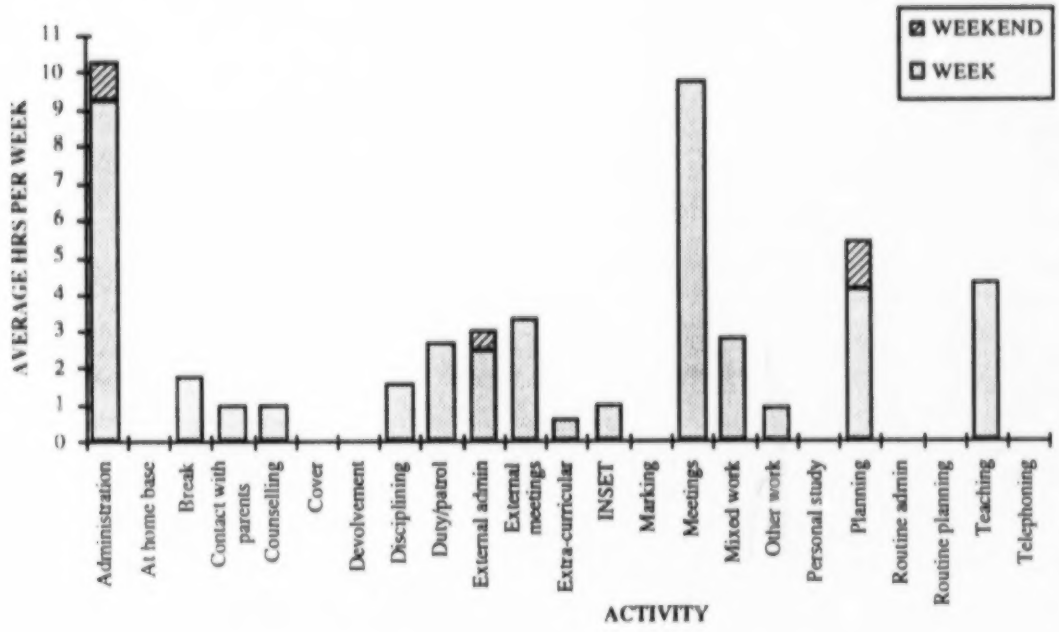


*Figure 4.3 : Principal teachers (subject) : task profile (N = 65)*

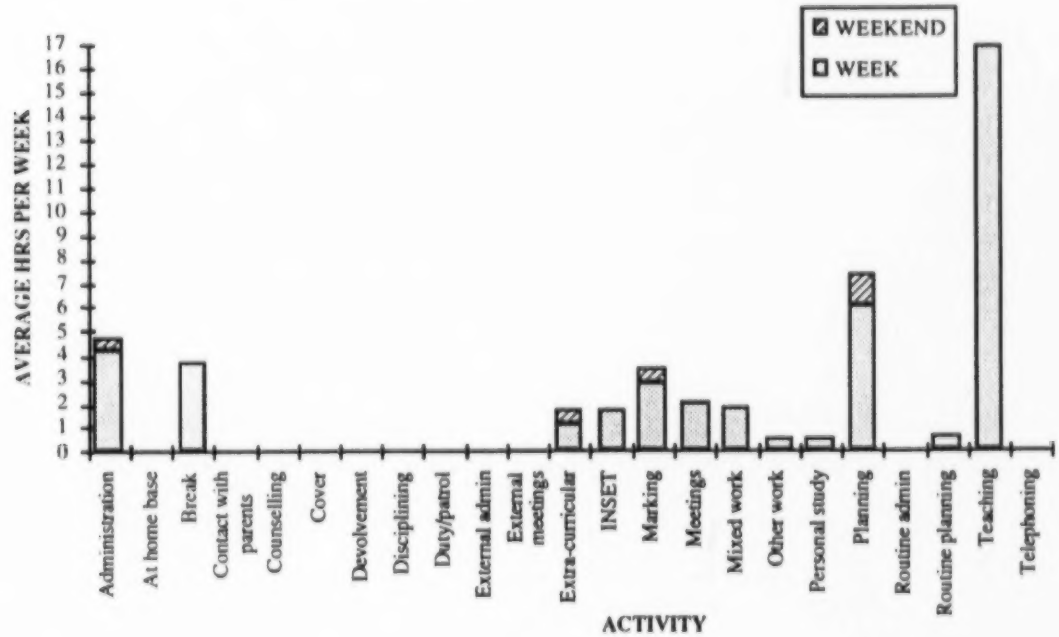




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*Figure 4.4 : Principal teachers (guidance) : task profile (N = 42)*

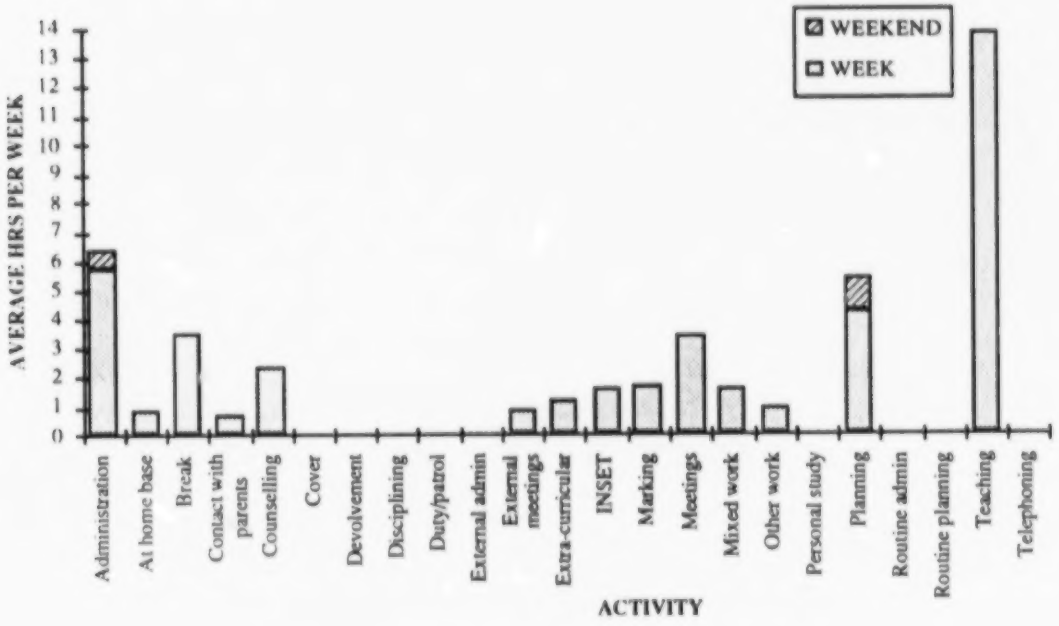


*Figure 4.5 : Primary teachers : task profile (N = 177)*

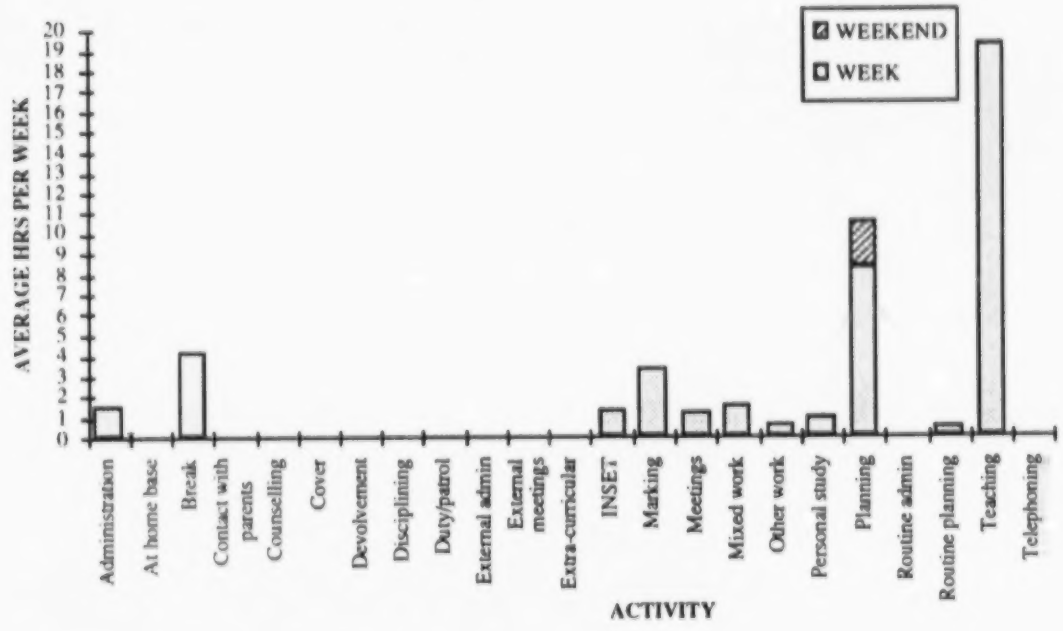




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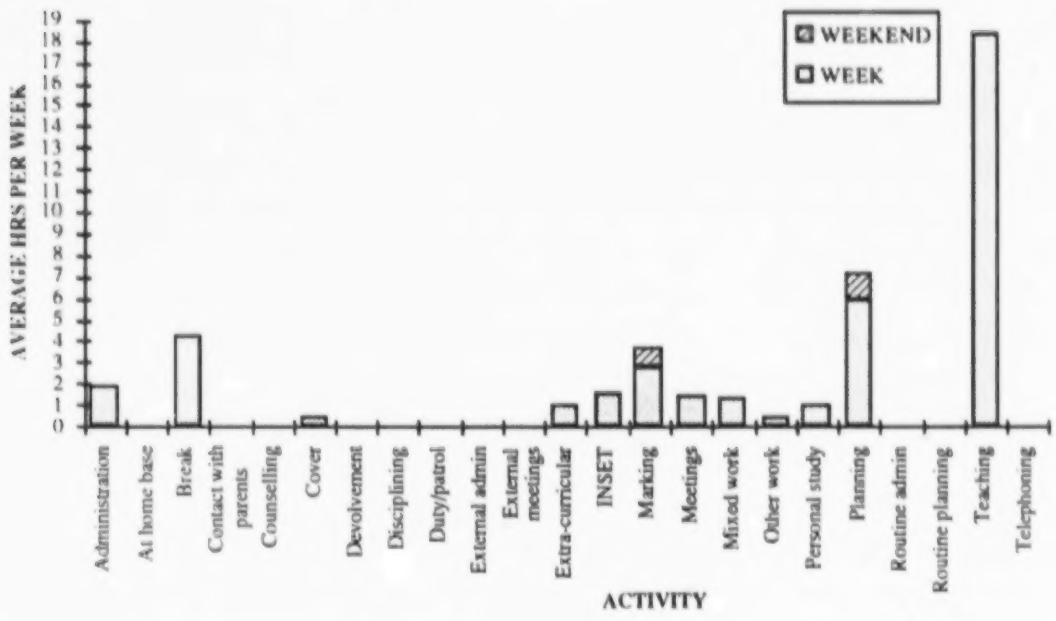
*Figure 4.6 : Secondary teachers : task profile (N = 172)*




As might be anticipated, school management in the secondary schools spent more time on planning and administration than on teaching, although in primary schools the balance was more even. Teachers, both secondary school and primary school, spent the majority of their time in class contact.

**The missing time**

The six histograms showed which aspects of teaching took up most of the time for each of the sub-groups. For example, administration took up overall about a fifth of senior management time in secondary, slightly less in primary. However, the histograms do not show minority time use. The category 'routine administration' took up a small amount of overall weekly time, for instance, too small to appear on the histograms. Indeed, some senior management did no routine administration (ie putting letters in envelopes); others spent a whole afternoon or evening on tasks:

> ...which are nothing to do with my real work and could be done by a competent auxiliary if only we had such a person.

The uneven spread of these aspects of the job meant that overall, when averaged out, each person appeared to spend about twenty or thirty minutes per week on such tasks when in fact some school heads had spent what they saw as an unacceptable amount of time on trivial administrative routine, especially in primary schools.



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One other example of minority tasks may be of particular interest. The question of devolved management is of concern to all teachers, particularly middle management. In the explanation of the codewords given with the *Workload Diaries*, principal teachers were encouraged to specify if possible when time was spent on a devolved responsibility. Overall, the total time spent on this appeared to indicate that principal teachers spent about twenty minutes a week on such work, a figure too small to be in the histogram. Again, this obscures the reality, which was that twelve people out of the 65 accounted for all of the devolved management work. Whether other principal teachers would also take on such work at other stages in the term or school year, we can only speculate.

**Summary**

- The codewords offered appeared to have been understood and used consistently
- Expansions added to codewords by the respondents suggested that the tasks themselves were not unexpected
- Minority time tasks were unevenly distributed; a few people accounted for most of the incidence of these minority time tasks.

## 5 DAILY STRESS

*As well as attempting to quantify and to describe workloads in teaching, the research explored connections between daily work and stress. The important point to keep in mind here is that no pre-definitions of stress or of stressors were offered. There were no codes or checklists. Response to the stress questions was as lengthy or short as the teachers wished, and was anchored to each specific* ***Workload Diary*** *day just completed.*

Most work on teacher stress asks teachers to reflect back on their teaching, although a few studies (eg Woodhouse, Hall and Wooster, 1985) have asked teachers to keep a stress diary or daily record of stressful incidents. In this research, the respondents were asked to look back at the day they had recorded, and consider whether they had felt stressed during the day or during the evening of the day. This approach allowed people to focus on what they had done rather than on teaching in general, but it did lack the immediacy of stress noted at the time it was felt.

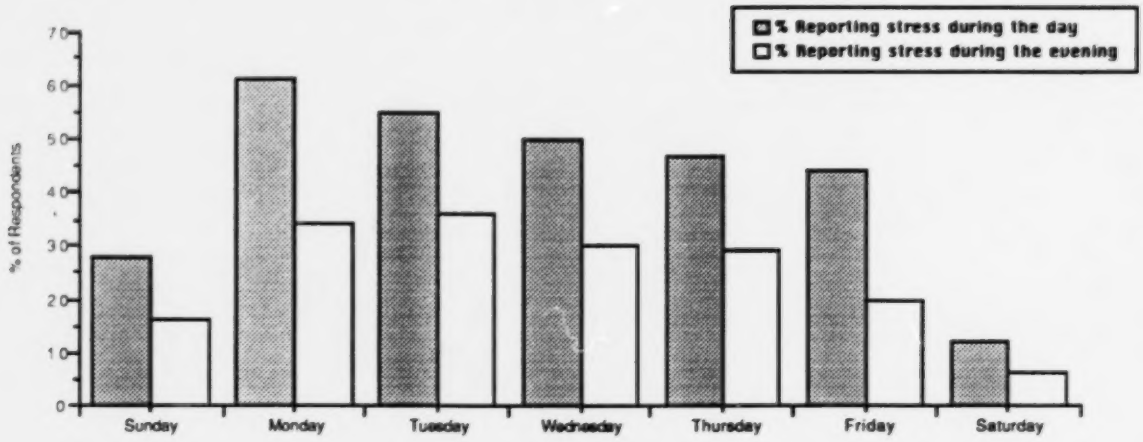
Feeling stressed is not the same as feeling unable to cope with stress. Coping mechanisms are very important in mediating the effects of stress (Dunham, 1984) and we shall look at this later in the chapter.

**The frequency of stress self reports**

The system of daily self-report allowed for a range of response, from no stress to stress reported twice each day. Only 7% (N = 39) of the sample registered no stress at all. On looking over the day/evening 93% of the sample (531 people) felt stressed at least once during the week.

Few people registered ten or more stress experiences;10% (N = 56) of the sample fell into this category. Of the rest of the sample, the majority registered between three and five stress experiences during the week. What people meant by feelings of stress, and whether their feelings of stress were comparable is a moot point. These frequencies, therefore, should be treated with caution. For every day, there were two possible occasions of stress report, during the day and in the evening. Figure 5.1 shows the pattern of stress incidence over the seven days and seven evenings of the survey week.

*Figure 5.1 Stress incidence over the seven days.*




The histogram graphically displays stress reports peaking at the early part of the week then tailing down to the low of Saturday, only to rise again on Sunday when, as one typical quote put it:

> You're thinking about unsolved problems from last week, trying to think of solutions **and** thinking of next week's enormous work load.

In addition, Sunday was a day of competition between work demands and family demands:

> Trying to balance home and school, with preparation, planning then forward plans to write — the family want attention at the same time.

This was not solely a primary school/female response. The disruption of home and family routines on Sundays was noted as a cause of stress by women and men. However, this was not the most frequent cause of stress.

**Causes of stress**

When the teachers reported what had caused the stress they felt, they were not replying to a pre-defined checklist. It was open to them to write as much or as little as they wanted, in order to describe what they felt. These replies were read, discussed and categorised into cognate groupings. From the replies given, it was evident that the volume of work, the pressures of deadlines for preparation and/or administrative tasks, the struggle with several tasks all of top priority and the consistent pressure of low priority work all combined to make a category of stressor called workload. In a research project which is overtly studying workload, this may seem a self-fulfilling prophecy. Indeed, in other researches investigating stress in teaching, workload in always an important factor (Byrne, 1992; Dewe, 1986; O'Connor and Clarke, 1990; Starnaman and Miller, 1992, Wynne, Clarkin and Dolphin, 1991). In the analysis we tried to break down workload into finer categories, but the different aspects were so entangled that it was



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impossible to do so. Furthermore, when several causes of stress were listed by a respondent, one of these causes was almost invariably workload. Before going on to describe what the teachers meant by this broad term *workload*, we should consider the relative reporting of different causes. This is shown in Figure 5.2.

*Figure 5.2 The range of reported causes of stress*

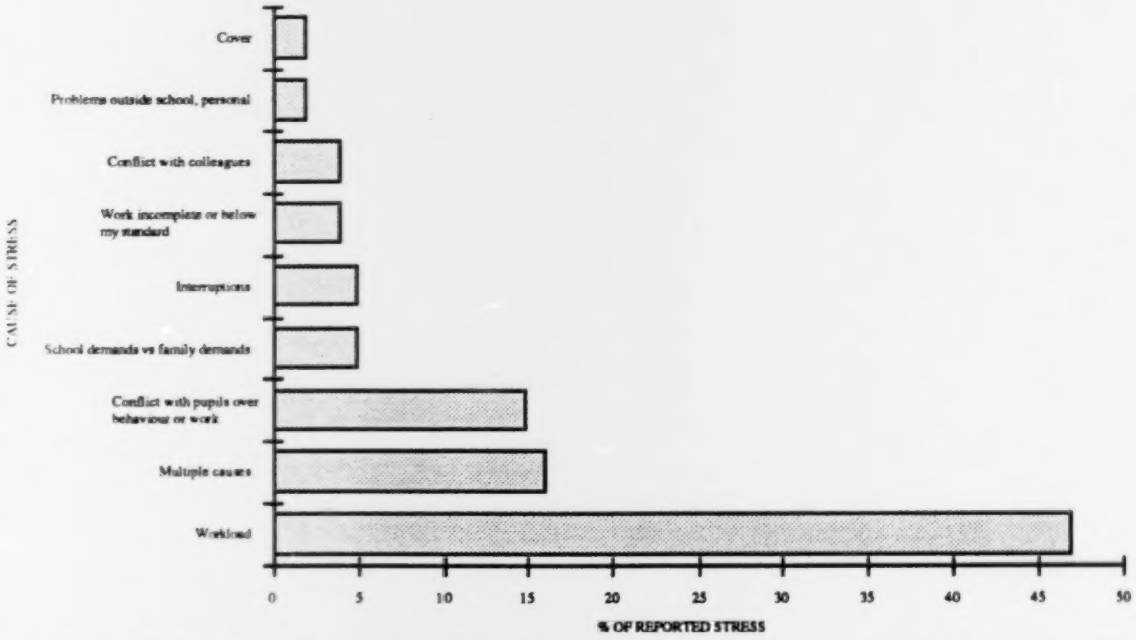


Figure 5.2 is based on the number of times each cause of stress was mentioned. For example, *workload* accounted for 47% of the overall pool of stress causes while *conflict with pupils* accounted for 15% of the overall stress causes. In fact 71% of the sample (N = 405) mentioned *workload* as a cause of stress at least once during the week, while 44% (N = 193) mentioned *conflict with pupils*. However, *conflict with pupils* tended to be mentioned only once or perhaps twice by the same person, whereas *workload* was a recurring cause of stress for over half those who reported this as a stressor. Showing the relative share each stress cause took up of the overall pool of causes gives a fairer picture. Of course, this does not give any indication of the strength or impact of the specific causes of stress. Research into teacher stress often identifies *conflict with pupils* over behaviour or over work as a major if not the major cause of stress. For this sample of teachers, looking at a real working week, this cause was less frequently reported than *workload* stressors. Perhaps when conflict with pupils arises it displaces other potential sources of stress in importance or impact, if causes of stress are to be ranked, but for our sample over the survey week *workload* was the principal stressor in terms of frequency of occurrence and cumulative effect.

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Each of the causes of stress listed in figure 5.2 is sufficiently self explanatory, save the broad category of *workload* itself. Detailed illustration of what people meant by *conflict with pupils* or *conflict with colleagues*, for example, does not seem essential. However, a breakdown of what problems were reported in relation to workload is needed.

**Workload described**

Rather than restate the point already made about the complexity and interrelated quality of work tasks, we present in this section a series of quotations from teachers. These have been selected not because they are striking or unusual, but because they express descriptions of stressful workload which were common to the 71% of the sample (N=405) who reported this.

*Senior management and middle management workload stressors:*

> ...a week where there were too many out of school meetings resulting in me trying to catch up and never succeeding
>
> ... PAT time *should* have been spent on 5 - 14 Guidelines but some staff required explanation of other new material
>
> ...extra work being demanded from the Directorate in relation to School Development Planning, on top of a very busy programme - and a student to supervise
>
> ...Headteachers' meeting where I was in a minority over devolved management of schools and had to convince others of my point of view.
>
> ...so many meetings over the week and a busy week involving evening events [in the school], and with most of the day devoted to personal contact with staff, parents and pupils. I fell well behind in admin.
>
> ... another PT meeting which concerned new Risk Audit legislations which threatened to add other burdens to the admin load.
>
> ...[it was] the knowledge that I was doing an **admin** task on Sunday, while I had marking and preparation still lying untouched

The quotations are from headteachers, depute or assistant heads (both primary school and secondary school) and from principal teachers. For those respondents, the demands of administration, of school organisation and (for some) of teaching were in conflict. Basically, 'too many jobs and not enough time' was the common theme describing the working day.

*Teachers' workload stressors*

> ...trying to implement 5 -14 targets when planning [it's] difficult because the method is still new and unfamiliar. [It] requires rethinking of methods and materials.

> ...[It's] stressful when you are coping with the breadth of the present curriculum. [I] feel disappointed that I am not coping well with it, having taught since 1976.
>
> ...too much time on forward plans instead of preparing work for actual lessons.
>
> ...increased demand for paperwork - a workplan demanded for every class, every term; extra reporting and assessing etc is implied.
>
> ...a meeting which largely identified additional administration - which has been delegated to myself.
>
> ...it's spending the evening planning for the next day after a physically tiring day working with the class.

For the primary school teachers the work of preparing materials for up to six pupil groups in the classroom, plus the demand from within and outside the school for paper evidence of work, contributed towards feelings of workload induced stress. For the secondary school teachers, the work of preparation and marking, of keeping up with new demands and of complying with administrative needs similarly led to repeated workload stress. Forms and deadlines were a particularly stressful combination for both primary and secondary teachers.

For both the management and teacher respondents, the quotes given referred to actual tasks done (or not done) and to specific incidents. Besides these reports of daily workload stressors, the respondents wrote more general points in reply to a final open question in *Workload Diary*; 62% (N=352) completed this section. Not surprisingly, workload was a major focus of concern here too. A variety of comments were made about this, ranging from descriptions of various work tasks to analysis of how the workload cycle varied over the school year. About six in ten people (almost four in ten of the full sample) gave specific workload factors as stressful. These were:

- changes to the curriculum, particularly for the 5 - 14 programme, allied to poor resources or lack of training for change
- the increasing volume of paperwork demanded both for planning and for administration.

These criticisms were broadly based on general workload, not specific to the week of the survey. Pace of change and increasing demands were described in some detail in the open response section.

**Relationships between hours worked and reported stress**

The teachers made general points about workload, and cited workload tasks as specific causes of stress during the survey week. Of course, someone who notes workload tasks as stressful does not necessarily have to be working hard, but in fact the data from the sample indicated that the heavier the workload, the higher the level of stress reported.

This was statistically significant at a very high level (.0001); that is, a chance agreement between the two sets of figures was very unlikely. Those who recorded more hours of work also

reported more incidence of stress. There is little research on the effect of teacher stress on pupils, but one of the stress symptoms reported by some teachers in the sample was aggression, or bad temper, or impatience. We might speculate that working longer hours and feeling stressed could have spin-off effects on the pupils or indeed on the school itself. If a positive and productive school ethos is seen as desirable, then these stress symptoms could prove detrimental to school aims. Symptoms and coping strategies are discussed in the next section, but one aspect of being able to cope may be whether the demands made are seen as reasonable or unreasonable. The respondents were asked some general questions about this.

**Reasonable or unreasonable workload**

In Chapter 3 the relationship between perceptions of the typicality of the survey week and whether the workload for the week has been reasonable were discussed. This latter question also has implications for stress, and in fact those who thought the week's workload had been unreasonable were also highly likely to have reported more stress incidents. Again, this was statistically significant at a high level (.003). In addition, those who thought the week's workload had been unreasonable were likely to have recorded longer hours of work in the *Workload Diary*. This too was statistically significant at a good level (.05). The data from the sample indicated that people were not arbitrarily judging the week as reasonable or unreasonable, but apparently reflecting more time spent on work and more stress incidents.

Besides the overall judgement of reasonable/unreasonable as applied to the work of the survey week, the respondents were asked to make two more general assessments of their work time. Firstly, they were asked to note what seemed to them to be a reasonable amount of their own time to spend on preparation and planning. About half the sample thought that up to five hours extra would be reasonable; of the remainder, the majority considered that six to ten hours would be reasonable, with the minority setting an even higher target for themselves. Secondly, they were asked to estimate how many hours they did spend on preparation and planning in a week. This was only an estimate, but nevertheless, the difference between the estimate and what was considered reasonable was striking. The respondents did not make this comparison themselves; there were two different questions to be answered, in brief 'reasonable extra time' and 'estimated actual extra time'. The answers to these two questions were compared, and it emerged that:

- 75% (N=427) estimated they spent more extra time than they saw as reasonable on preparation and planning
- 22% (N=127) felt that extra time spent matched what they saw as reasonable
- 3% (N=16) spent less extra time than they saw as reasonable.

This was a perception rather than a recorded difference, nevertheless the perception appeared to reflect hours of work. People who perceived themselves as spending over their personal reasonable limit of extra time were people who tended to record higher levels of work in the *Workload Diary*. This was statistically significant at the very highest level (.0000). It was also

the case that the incidence of stress experiences was higher, the more extra time people felt they spent over their personal limit. This too was statistically significant at the highest level (.0003). Basically, the data indicated that those who perceived themselves as working unreasonable hours were the same people as those who worked longer hours, and that these same people tended to be those who reported more experiences of stress. As we noted at the start of this chapter, however, feeling stressed is not the same as feeling unable to cope with stress.

**Symptoms and coping strategies**

The respondents were not given a checklist of stress symptoms, but were asked to write down how they judged themselves as stressed. Broadly speaking, the signs or symptoms fell into two main areas, the physical and the mental. About half of the signs reported were physical ones such as headache or stomach ache or exhaustion. Over a third of the reported signs were emotional feelings such as panic, depression or anxiety. Common symptoms here were:

> ...going over and over things needing to be done.
>
> ...starting one job, then remembering another and doing it and forgetting the original task.

However, the most commonly quoted emotional indicator of stress was anger:

> ...I feel like shouting at them [pupils] - am very short tempered
>
> ...lost my temper with a colleague
>
> ...issued punishment exercises (not my usual style)

Other symptoms were multiple, a mixture of physical and emotional, and there was also a grouping of less commonly given replies such as 'indecision - couldn't prioritise'.

Overall, 93% (N=531) of the sample experienced at least one stress incident during the week. The majority of the sample experienced between three and five such incidents. Each incident may have been relatively fleeting, but some at least of the signs of stress reported could have impinged on the pupils. Being on a short fuse is one obvious factor in creating an unsympathetic classroom atmosphere, but other signs of stress or reactions to stressful workload might also affect pupils. In the absence of classroom data or pupil views, these ideas are speculative, but previous work with pupils on their descriptions of good classroom discipline identified 'teacher mood' as an unexpected if minor contributor towards getting the class to work well (Johnstone and Munn, 1992).

Coping strategies could help the teachers defuse feelings of stress. For each of the week days and for Saturday, just under half of those who reported some stress also reported someone or something as helping cope with that stress. Slightly over half of those reporting stress reported getting no help from any source. For Sundays, almost two-thirds of those who reported stress also reported help from family or friends. Such help or buffering is a recognised factor in mediating the effects of stress (Billings and Moos, 1982; Holahan and Moos, 1983; Mo, 1991). As might be expected, the help offered or coping strategies adopted varied from person to person. A brief list might serve to show the range:

- *Colleagues helped*
  - A chat with a colleague, sharing the burden
  - The headteacher is very supportive and tries hard not to overload us
  - A colleague came into the classroom and put everything into perspective with a witty remark.
  - Another assistant head made me a cup of coffee and told me to slow down
- *Family, friends helped*
  - My daughter made me sit down with a cup of tea for half an hour
  - The company of friends took my mind off school
  - The family put things into perspective with some humour
  - My wife listened
- *Physical activity helped*
  - Half an hour swimming at lunch time
  - Riding my bike home
  - Staff play 5-a-side football after school on Friday - I find this enjoyable and therapeutic.
- *Hobbies/relaxing helped*
  - Two hours of yoga
  - Cinema in the evening (escapism) and a novel in bed (more escapism!)
  - A hot bath and going to bed early helped
  - Choir practice

Most people gave one or other of the four sources of help listed above, and some gave more than one during the week.

Increased alcohol or drug consumption is seen as one consequence of stress — or a coping strategy, perhaps. During the survey week, of the people reporting some stress experience or incident, one in twelve was helped by 'a glass of wine' or 'a stiff whisky'. Very few people noted any medication, with the exception of paracetamol for the headaches.

The coping strategies used by the respondents present no surprises. What is disquieting is that just over half of those reporting stress said that they had not done anything or had any help to cope with the stress. Perhaps some of these people were in effect saying that they did not need a specific strategy or help to cope. These people may have had the psychological 'hardiness' to take stress in their stride. Hardiness is a constellation of personality traits discussed in occupational stress research (Kobasa, 1979). On the other hand, they may have been unwilling or unable to admit to stress by sharing their problems or by seeking help. The research could not explore these issues, given that the bulk of the *Workload Diary* was devoted to a straightforward record of work. Nevertheless, this high percentage of people reporting some stress while also reporting an absence of help in disturbing.

**Summary**

- The majority of the sample, 93% (N=531), reported at least one stressful occasion during the week; most people reported between three and five incidences.
- Reports of stress peaked on Monday.
- Workload was the most frequent cause of stress; 'too many jobs and not enough time during the day'.
- New demands, administration and associated planning were quoted as stressors.
- The longer the hours worked, the more incidents of stress were reported.
- People who estimated that they spent more than their personal reasonable time on extra work tended to be working longer hours and to report more stress incidents.
- Self-reported symptoms of stress were not unexpected (physical and mental).
- Coping strategies used were largely in terms of support from family or colleagues, or various means of relaxation. One in twelve people reported taking 'a glass of wine' or 'a stiff whisky'.
- Over half the sample reported no coping strategies or no help given.

## 6 A PROFILE OF OCCUPATIONAL STRESS

*The respondents reported incidents of stress during the survey week. The longer the hours worked, the more incidents of stress were reported. The chief cause of stress recorded was the workload itself. The respondents also completed an* ***Occupational Stress Indicator*** *which gave a general stress profile.*

Completion of the *Occupational Stress Indicator* served two purposes. Firstly, it provided information on health and on personality traits relevant to stress, and it provided scores on job pressure and job satisfaction which could be correlated against the *Workload Diary* data. Secondly, there is a general population norm for the *Occupational Stress Indicator*, in addition to some group norms for specific occupations, against which teacher scores could be compared. The sample of 530 teachers who completed the OSI is of sufficient size for such comparisons.

A very important point has to be made about the OSI scores. On the various scales and sub-scales which make up the indicator, scores for this sample were not normally distributed. The skew in scores for most of the scales means that statistical comparison is limited, though still feasible if non-parametric tests are used.

### Comparisons with *Workload Diary* data

The *Workload Diary* provided for the survey week a record for each respondent of:

- the total number of hours worked
- the number of occasions of stress reported.

These two different kinds of data appeared to be linked, in that occasions of stress increased as hours of work increased. Furthermore, the chief cause of daily stress reported by the respondents was some aspect of workload. The previous chapter discussed these connections in some detail. The OSI takes a more generic approach to occupational stress, nevertheless connections might be anticipated here too. In fact, there were only very weak (although statistically significant) correlations between the recorded hours worked and some of the OSI scales. This implies that any connection between workload hours and the OSI scale scores is tenuous. The longer the hours worked, the higher the respondents scored on:

- poor mental health
- poor physical health
- pressure intrinsic to the job
- pressure arising from the managerial role
- pressure arising out of home/work conflict

None of the correlations achieved were very high, therefore it is difficult to speculate on anything other than a tenuous relationship between the two sets of scores. In any case, as with all

correlations, a significant result (even if weak) does not imply that one factor causes the other, it simply implies that both vary in similar ways.

In respect of the incidence of stress recorded by respondents, twelve different significant correlations with OSI scales or sub-scales emerged. Most of these were again rather weak, but four were more convincing (> 0.3). The higher the reporting of stressful occasions during the survey week, the higher the respondents scored on:

- poor mental health
- poor physical health
- pressure intrinsic to the job
- pressure arising out of home/work conflict.

The latter two sources of pressure were those already nominated by respondents in their answers to the question on causes of stress in the *Workload Diary*. The first two health aspects were the two major areas of stress symptom described by the respondents in the *Workload Diary*. If no correlation between the OSI scores and the *Workload Diary* stress incidence had emerged, given this basic commonalty of theme, then the validity of one measure or the other would have been cast into doubt. In fact, when all the sub-scales on sources of pressure were added to give a total pressure quotient for the OSI, another modest but statistically significant correlation with the incidence of stress reported by the sample emerged (> 0.3). On the other hand, only one of the coping strategy scales in the OSI correlated significantly but weakly against the stress incidence from the *Workload Diary*. The higher the incidence of stress, the greater the use of social support as a coping strategy. This too ties in with the teachers' responses to the open question on coping in the *Workload Diary*.

Overall then, the *Occupational Stress Indicator* scores gave rather similar patterns to teachers' scores in respect of incidence of daily stress. The *Occupational Stress Indicator* scores were less likely to mirror hours worked, although there was a very weak correlation here. It may be that the OSI taps into factors relating to the quality or nature of a job rather than the hours spent working.

**The stress profile**

The major scales of the *Occupational Stress Indicator* (work pressure, coping, mental and physical health) were coded and mean scores calculated. Following the suggestion in the OSI manual, broad sub-scale scores only were computed and coded to give frequencies and means for three other scales (Type A behaviour, locus of control and job satisfaction). Consequently, full mean scores on these three latter scales cannot be judged against the group norms. The sub-scale scores can be judged against more detailed sub-group means given in the OSI manual. Table 6.1 shows some general comparisons.

*Table 6.1 Teachers' mean scores on OSI scales against OSI norms*

| | Means and Standard deviations | | | | | |
|---|---|---|---|---|---|---|
| | Teachers N = 530 | | General Population N = 8000 | | Managerial sample N = ??* | |
| 1. ***Job pressure scales*** | *Mean* | *SD* | *Mean* | *SD* | *Mean* | *SD* |
| Factors Intrinsic to the job | 33.25 | 6.19 | 30.22 | 6.48 | 29.70 | 6.58 |
| The Managerial Role | 35.41 | 8.96 | 35.55 | 8.47 | 33.53 | 8.19 |
| Relationships with other people | 30.53 | 8.19 | 30.31 | 7.51 | 21.99 | 5.77 |
| Career and Achievement | 25.4 | 7.88 | 28.40 | 8.11 | 26.73 | 8.30 |
| Organisational structure and climate | 39.74 | 9.56 | 38.99 | 9.21 | 34.92 | 9.28 |
| Home/Work Interface | 32.22 | 9.56 | 30.99 | 10.26 | 24.68 | 8.64 |
| 2. ***Type A behaviour*** | | | | | | |
| Broad sub-scale | 20.78 | 4.01 | – | – | 18.86 | 3.20 |
| 3. ***Locus of Control*** | | | | | | |
| Broad sub-scale | 18.39 | 3.06 | – | – | 13.59 | 2.19 |
| 4. ***Coping strategies*** | | | | | | |
| Social Support | 16.21 | 3.34 | 15.07 | 3.26 | 13.54 | 3.56 |
| Task Strategies | 25.7 | 3.8 | 25.30 | 3.74 | 20.51 | 2.90 |
| Logic | 12.43 | 2.23 | 12.46 | 2.11 | 11.75 | 1.77 |
| Home and work relationship | 15.38 | 3.7 | 15.54 | 3.64 | 14.98 | 3.57 |
| Effective Use of Time | 14.42 | 2.18 | 14.34 | 2.14 | 14.23 | 2.14 |
| Involvement | 23.45 | 3.41 | 23.18 | 3.43 | 18.32 | 3.02 |
| 5. ***Job Satisfaction*** | | | | | | |
| Broad sub-scale | 18.79 | 4.03 | – | – | 20.91 | 3.34 |
| 6. ***Mental Health*** | 59.28 | 14.81 | 55.51 | 12.95 | 46.55 | 13.36 |
| 7. ***Physical Health*** | 35.23 | 10.86 | 29.88 | 9.70 | 22.47 | 7.05 |

*No number was given for this sample in the Occupational Stress Indicator manual

Table 6.1 gives the teachers' scores on the *Occupational Stress Indicator*, scores from a large general population and scores from a small sample of people in managerial posts. This is laid out in detail to indicate the extent of differences amongst the groups, and to show where standard deviations vary.

The headings given to the scales of the OSI are not always self-explanatory, nor is a high score always more negative than a lower score. The major points from the table are therefore set out in plainer terms below.

- Teachers are *less satisfied* than the general population with:
  - the factors intrinsic to the job
  - organisational structure or climate
  - the home/work interface

- They are *more satisfied* than the general population with:
  - career and achievement

- Teachers are *more likely* than the general population to cope with stress by using:
  - social support (ie seeking advice)

  In comparison with managers only, teacher are more likely to use all the coping strategies save 'effective use of time'.

- Teachers are *more likely* to register poorer mental and physical health scores than the general population/than managers.

  A high score on these scales indicates negative mental health (worry, upset, disproportionately irritated, etc.) and negative physical health (sleeplessness, headaches, increased food, alcohol, cigarette consumption, etc.)

- Teachers are *more prone to Type A behaviour* (aggressive, competitive, striving) than managers, but the authors of the OSI felt that the managers' mean score here was 'surprisingly low' (p 60, *OSI Manual*; Cooper, Sloan and Williams)

- Teachers are *more convinced that the job is controlled by someone else* than are managers, although the teacher sample included 36% (N=212) in promoted posts, who might be expected to take a 'managerial' viewpoint.

- Teachers are *less satisfied* with their job than are managers.

In addition to the general population norms and the management norms, there are scores on the OSI for a variety of occupations: senior police officers, health workers (doing various jobs), water company employees, brewery workers, ambulance workers, general practitioners, senior civil servants and university lecturers. Although it has been claimed (Fletcher and Payne, 1980 a, b) that blue collar workers suffer more stress arising out of factors such as repetitive, routine work, none of the blue collar groups approached the teachers' mean score. The only group which approached the teachers' mean score on the scale 'factors intrinsic to the job' (mean = 33.25) was the group of general practitioners (mean = 32.48). The difference in scores was statistically significant.

This research had its principal focus on workload and associated stress. Following up the different stress scales in more detail would require further research. Nevertheless, it is worth adding that Type A behaviour, apparently higher in teachers than in a sample of managers, and often seen as a personality predictor of stress, did not correlate either with the teachers' hours of work or with their report of stress occasions. In other words, it may be that teachers are unlikely to be the aggressive, driven personalities who create stress for themselves (or are created by stress). The caution expressed by Cooper *et al* about management scores on the Type A broad sub-scale may be well-founded. On the other hand, the teachers' scores on the scale 'locus of control' had a statistically significant but weak correlation with their reporting of day-to-day incidents of stress. Any casual connection is extremely tenuous, but this was some slight indication that the higher the number of stress occasions, the more likely that the teachers saw themselves as not in control of their own life or work. Change is, of course, an important factor in creating stress, especially change which is controlled by someone else. Other research (Travers and Cooper, 1989) has found this to be an important part of teacher stress. Paradoxically, teachers appeared to be more satisfied than the general population with their career and achievement. Perhaps this score simply reflects the high proportion of senior staff in the sample (37% N = 212) but perhaps it also indicates that a positive emphasis on enhancing teachers' work would benefit the profession.

**Summary**

- The longer the work hours, the higher the score for *pressure from the job*, from *the managerial role* and from *conflict between home and work*. These correlations were very weak but statistically significant.
- The higher the incidence of daily stress, the higher the score for *pressure from the job* and pressure from *conflict between home and school*. These correlations were stronger but still fairly modest, although statistically significant.
- Both work hours and daily stress correlated modestly but significantly with scores on poor mental health and poor physical health.
- Teachers were less satisfied than the general population with factors intrinsic to the job, the organisational structure or climate in which they worked and the home/school interface.
- Teachers had a higher mean score for stress arising out of factors intrinsic to the job (33.25) than any other group in the *Occupational Stress Indicator* samples. The nearest group score was achieved by general practitioners (32.48)
- The OSI scores and any comparisons should be treated with caution. The teachers' scores do not follow a normal distribution.

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## Appendix 1 — Sample pages of a *Workload* Diary

**TUESDAY 14th SEPTEMBER**

Reminder list of codewords to use in the ***Record of Time:***

**TEACH** **PLAN** **MEET** **MARK** **ADMIN** **PUPIL** **EXTRA**
**PARENT** **INSET** **SUPP** **SELF** **BREAK** **TRAVEL**

**OTHER** (please add *what*) Use /// for any time span(s) not connected to work.

41

## *Record of time*

*Please write in the appropriate codeword for each 15 minute section.*

*00-15* _____
*15-30* _____
*30-45* _____
*45-00* _____

**7 am**
00-15 _____
15-30 _____
30-45 _____
45-00 _____

**8**
00-15 _____
15-30 _____
30-45 _____
45-00 _____

**9**
00-15 _____
15-30 _____
30-45 _____
45-00 _____

**10**
00-15 _____
15-30 _____
30-45 _____
45-00 _____

**11**
00-15 _____
15-30 _____
30-45 _____
45-00 _____

**12**
00-15 _____
15-30 _____
30-45 _____
45-00 _____

**1**
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15-30 _____
30-45 _____
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**2**
00-15 _____
15-30 _____
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**3**
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**4**
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**5**
00-15 _____
15-30 _____
30-45 _____
45-00 _____

**6**
00-15 _____
15-30 _____
30-45 _____
45-00 _____

**7**
00-15 _____
15-30 _____
30-45 _____
45-00 _____

**8**
00-15 _____
15-30 _____
30-45 _____
45-00 _____

**9**
00-15 _____
15-30 _____
30-45 _____
45-00 _____

**10 pm**
00-15 _____
15-30 _____
30-45 _____
45-00 _____

*00-15* _____
*15-30* _____
*30-45* _____
*45-00* _____

42 - 45
46 - 49
50 - 53
54 - 57
58 - 61
62 - 65
66 - 69
70 - 73
74 - 77
78 - 81
82 - 85
86 - 89
1 - 9 6
10 - 13
14 - 17
18 - 21
22 - 25
26 - 29
30 - 33
34 - 37
38 - 41
42 - 45
46 - 49
50 - 53
54 - 57
58 - 61
62 - 65
66 - 69
70 - 73
74 - 77
78 - 81
82 - 85
86 - 89
1 - 9
10 - 13
14 - 17
18 - 21
22 - 25

1. Did you feel stressed *during* this day? Yes.....1 No..... 2 26

and/or *after* this day? Yes.....1 No.....2 27

***If you have answered YES to either question***, please go to Section 2 on this page.

***If you have answered NO to both these questions***, that's all for today, thank you.

Tomorrow's *Record of Time* is on page 9.

---

2. ***To be answered if you said YES to either part of Q1***

2.1 What do you think caused this stress?

☐☐☐☐ 28 - 31

2.2 How did you judge that you felt stressed - what were the symptoms or indicators?

☐☐☐☐ 32 - 35

2.3 Did anyone or anything help you cope with this stress? Yes.....1 No.....2 36

***If yes***, who or what helped - please describe this briefly.

☐☐☐☐ 37 - 40

Thank you. That's all for today. Tomorrow's *Record of Time* is on page 9.

## APPENDIX 2: DETAILS OF THE RESPONDENTS

*Table A.1: Gender*

| Category | | N | % |
|---|---|---|---|
| Primary | — Female | 223 | 93 |
| | — Male | 18 | 7 |
| Secondary | — Female | 155 | 48 |
| | — Male | 166 | 52 |

*Table A.2: Age*

| Category | N | % |
|---|---|---|
| 34 and under | 104 | 18 |
| 35-44 | 237 | 42 |
| 45 and over | 229 | 40 |

*Table A.3: Years in teaching*

| Category | N | % |
|---|---|---|
| 5 and under | 70 | 12 |
| 6-10 | 74 | 13 |
| 11-15 | 110 | 19 |
| 16-20 | 144 | 25 |
| 21-25 | 89 | 16 |
| 26-30 | 53 | 9 |
| 31 and over | 30 | 5 |

*Table A.4: Years in present school*

| Category | N | % |
|---|---|---|
| under 1 year | 38 | 7 |
| 1 year | 38 | 7 |
| 2-5 years | 190 | 33 |
| 6-10 years | 118 | 21 |
| 11-15 years | 68 | 12 |
| 16-20 years | 82 | 14 |
| 21-25 years | 24 | 4 |
| 26-30 years | 10 | 2 |
| 31 and over | 2 | 0.5 |

*Table A.5: Post in School* (a small number of senior teachers and APTs replied; they were coded as teachers)

| Category | N | % |
|---|---|---|
| Primary teachers | 177 | 31 |
| Management in primary | 58 | 10 |
| Secondary teachers | 172 | 30 |
| PT Subject | 65 | 11 |
| PT Guidance | 42 | 7 |
| Management in secondary | 47 | 8 |
| Nursery teachers | 8 | 2 |

*Table A.6: Experience in different schools*

| Category | N | % |
|---|---|---|
| Experience of one school | 128 | 23 |
| Experience of 2 or 3 schools | 265 | 47 |
| Experience of 4 or more schools | 177 | 31 |

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